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**CLAIMS**

[Claim 1]

A poured molten metal quantity control device used in a rotary pouring apparatus comprising the following items (1)

- (5):

(1) a fixed plate brick mounted on the bottom of a molten metal vessel through a base plate and having at least one pouring port;

(2) a collector nozzle brick disposed in confrontation with the fixed plate brick with its pouring port located concentrically;

(3) a slide plate brick sandwiched between the collector nozzle brick and the fixed plate brick in contact therewith so as to slidingly turn on the sliding surfaces of the collector nozzle brick and the fixed plate brick and having at least one pouring port;

(4) a flame on which the slide plate brick is mounted;

(5) an outer race mounted so as to be turned on the outer peripheral side of the fixed plate brick by an extendable unit, and

further, the device is characterized in that:  
the device controls the pouring amount of the molten metal by adjusting the relatively open position of the pouring port of the slide plate brick and the pouring port of the fixed plate brick by turning the outer race with the extendable unit;

the flame is attached to the outer race through a pivotal hinge so as to be capable of open and close

operation on the pivotal hinge irrespectively of the turning means of the outer race comprising the extendable unit, and

the outer race is turned by a crank mechanism using triangle points consisting of a support pivot P1 for supporting the extendable unit, the center of turn P3 of the outer race, and a pivot P2 engaged with an end of an extendable rod of the extendable unit disposed to the outer peripheral portion of the outer race, and the stroke of the extendable unit and the position of the support pivot P1 of the extendable unit are selected to cause a completely open position, at which the pouring port of the slide plate brick is matched with the pouring port of the fixed plate brick, to act as an end position and a position turned from the end position by a predetermined angle to act a start position.

[Claim 2]

A poured molten metal quantity control device used in a rotary pouring apparatus comprising the following items (1)

- (5) :

- (1) a fixed plate brick mounted on the bottom of a molten metal vessel through a base plate and having at least one pouring port;
- (2) a collector nozzle brick disposed in confrontation with the fixed plate brick with its pouring port located concentrically;
- (3) a slide plate brick sandwiched between the collector nozzle brick and the fixed plate brick in contact therewith so as to slidingly turn on the sliding surfaces of the collector nozzle brick and the fixed plate brick and having

at least one pouring port;

(4) a flame on which the slide plate brick, into which the slide plate brick is internally fitted, is mounted,

(5) an outer race into which a fixed plate having the fixed plate brick is internally fitted and which is mounted so as to be turned on an outer peripheral side by an extendable unit, and

further, the device is characterized in that:  
the device controls the pouring amount of the molten metal by adjusting the relatively open position of the pouring port of the slide plate brick and the pouring port of the fixed plate brick by turning the outer race with the extendable unit;

the flame, the slide plate, and the fixed plate are attached to the outer race through pivotal hinges on coaxial hinge shafts, respectively so as to be capable of open and close operation on the pivotal hinges irrespectively of the turning means of the outer race comprising the extendable unit; and

the outer race is turned by a crank mechanism using triangle points consisting of a supporting the extendable unit, the center of turn P3 of the outer race, and a pivot P2 engaged with an end of an extendable rod of the extendable unit disposed to the outer peripheral portion of the outer race, and the stroke of the extendable unit and the position of the support pivot P1 of the extendable unit are selected to cause a completely open position, at which the pouring port of the slide plate brick is matched with

the pouring port of the fixed plate brick, to act as an end position and a position turned from the end position by a predetermined angle to act a start position.

[Claim 3]

A poured molten metal quantity control device according to claim 1 or 2, characterized in that the extendable unit is a hydraulic or air cylinder unit.

[Claim 4]

A poured molten metal quantity control device according to claim 1 or 2, characterized in that the extendable unit is a screw type unit.

[Claim 5]

A poured molten metal quantity control device according to claim 1 or 2, characterized in that the extendable unit is a rack/pinion type unit.

[Claim 6]

A poured molten metal quantity control device according to any one of claims 1 to 5, characterized in that the end position and the start position respectively correspond to the stroke 0 and entire length positions of the extendable rod of the extendable unit.

[Claim 7]

A poured molten metal quantity control device according to any one of claims 1 to 6, characterized in that the turn angle  $\theta$  between the radius of turn of the start position and the center line connecting between the support pivot P1 and the pivot P2 is  $90^{\circ} \pm 30^{\circ}$ .

[Claim 8]

A poured molten metal quantity control device according to any one of claims 1 to 7, characterized in that the pouring port of the fixed plate brick and the pouring port of the slide plate brick are two or three pouring ports disposed in symmetry with respect to a turn direction.

[Claim 9]

A poured molten metal quantity control device according to any one of claims 1 to 8, characterized in that the slide plate brick is internally mounted in a sliding plate case reversibly attached to the frame.

[Claim 10]

A poured molten metal quantity control device according to claim 9, characterized in that the fixed brick is further reversibly attached to a bottom plate case engaged with the base plate through a pivotal hinge.